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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHITAKE SHINKAI, NAOMI YOSIZAWA,
and KENSUKE SHIOZAWA

Appeal 2008-3356
Application 09/817,288
Technology Center 2400

Decided:¹ May 5, 2009

Before JAMES D. THOMAS, HOWARD B. BLANKENSHIP,
and STEPHEN C. SIU, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-8, 10-12, 14, and 16-28. We have jurisdiction under 35 U.S.C. § 6(b).

We Affirm.

INVENTION

A token managing portion manages an access request for a shared file in a node. An I/O request intercepting portion in each node asks the token managing portion to acquire access permission for the shared file in response to an access request for the shared file in the node itself. The token managing portion notifies the I/O request intercepting portion of a node that has update permission in response to the access request of the I/O request intercepting portion. The I/O request intercepting portion asks the node that has the update permission to access the shared file when the I/O request intercepting portion is not capable of acquiring the access permission. (Figs. 1, 3A, and 4 and Abst. 128).

REPRESENTATIVE CLAIM

Below is reproduced independent claim 28:

28. A computer-readable portable storage medium, when being used by a computer that composes a node connected to other nodes through a network in a file replication system, on which is recorded a program for causing the computer to execute a process, said process comprising:

when the node accesses a file and a node itself has the latest data of the file and has or is able to obtain access permission from another node having update permission for the file, causing the node itself to access the file of the node itself; and

when another node has the update permission for the file which is given to only one node at a time, causing the node itself to ask the other node to access the file.

PRIOR ART AND EXAMINER'S REJECTIONS

The Examiner relies on the following references as evidence of unpatentability:

Tavares	US 5,515,537	May 7, 1996
Loucks	US 5,634,122	May 27, 1997
Slaughter	US 5,964,886	Oct. 12, 1999

All claims on appeal, claims 1-8, 10-12, 14, and 16-28 stand rejected under 35 U.S.C. § 103. As evidence of obviousness as to claims 1-3, 8, 10-12, 14, 23, 25, 27, and 28, the Examiner relies upon Slaughter in view of Loucks in a first stated rejection. In a second stated rejection as to claims 4-7, 16-22, 24, and 26, the Examiner relies upon the initial combination of references, further in view of Tavares.

Claim Groupings

Based on Appellants' arguments in the principal Brief on appeal, we will consider independent claim 1 as representative of independent claims 1 and 10; independent claim 2 as representative of independent claims 2 and 11; independent claim 8 as representative of independent claims 8 and 12; independent claim 14 as representative of independent claims 14 and 28; and independent claim 27.

ISSUES

1. Have Appellants shown that the Examiner erred in finding that subject matter of independent claims 1, 2, 8, 10, 11, 12, 14, 27, and 28 would have been obvious to one of ordinary skill in the art in view of the teachings of Slaughter and Loucks.

2. Have Appellants shown that the Examiner erred in finding that the combination of Slaughter in view of Loucks, further in view of Tavares, would have rendered obvious to one of ordinary skill in the art the subject matter of dependent claims 4-7, 16-22, 24, and 26 in the second stated rejection.

FINDINGS OF FACT (FF)

1. As a part of their assessment of the state of the art, Appellants state at Specification page 3, line 14 through Specification page 4, line 2, the following:

Thus, in the conventional file replication method, only one statically designated node is permitted to update a file. The other nodes are permitted to only reference the file. Such a method is disclosed, for example, in Japanese Patent Laid-Open Publication No. 9-91185 titled "Distributed Computing System". In this method, a write token and a read token are prepared. With a write token, a node can update and reference the data of a file of the node itself. With a read token, the node can only reference the data of the file of the node itself. When there is a node having a write token, other nodes are prohibited from having both a read token and a write token.

It is further stated at Specification page 4, lines 16-18 that in “[i]n the conventional replication method . . . it is assumed that each node accesses the data of the node itself.”

2. At least from the paragraph bridging columns 2 and 3 in the Summary of the invention in Slaughter, one of ordinary skill in the art would appreciate that this reference teaches sharing identical data among computerized nodes. A more detailed discussion is found with respect to Figure 3 beginning at column 9, line 5. As a part of these dialogs, Figure 3 shows (note also column 10, lines 8 to 29) and Figure 9 details that Internet protocols may be used to communicate between the nodes as discussed at column 14, line 32 through column 15, line 46; these dialogs include control messages and data blocks. The artisan would thus consider therefore that these messages are communicated by means of conventional packet tokens using conventional Internet protocols.

3. Figures 10 and 11 of Slaughter illustrate dialogs and flows with respect to permission data that resides in a common Cluster Configuration Database (CCD) shown initially in Figure 3 that is present in each node of Slaughter's paired and clustered nodes. The mapping associated with this CCD is consistently updated in all nodes. Permission modes (Figure 10) include read (r), write (w) and execute (x) and a dash line to indicate no permission for each respective node. Within the discussion of Figures 10 and 11 beginning at column 15, line 46, at column 16, lines 27 through 46, it is stated:

To ensure consistent permission data among the nodes of the cluster, the permission data may be stored in a highly available database. In one embodiment, multiple nodes within a cluster have representations of a device. To maintain consistent permission data among the nodes even in the presence of a failure, the permission data is stored in a cluster configuration database (CCD).

In one embodiment, when a node first opens a virtual device, the permission data for that device are read from the CCD and a device file is created with the permission data. In one embodiment, the device file is only created the first time a virtual device is opened by a node. In one embodiment, a filesystem operating on each node includes a daemon that queries the CCD for permission data of the device. The daemon returns the permission data to the filesystem, which creates a special device file with those permissions. Because the CCD may be queried by any node of the cluster and returns consistent information even in the presence of a failure, all nodes will have consistent permission data.

4. The Abstract of Loucks most succinctly states the essence of his invention:

A system and method for controlling access to shared resources in a distributed computer system. Access to shared resources is controlled by a local authorization token manager. Only computer processes holding authorization tokens for the requested operation may perform that operation. Each requested operation checks for the proper token. If the token is not held by the process, it is requested. The local token manager resolves token conflicts before granting tokens. A token manager of a distributed file system export protocol also is able to request authorization tokens from the local token manager. The export protocol token manager controls authorization tokens for that particular distributed file system protocol. Multiple different export protocols may request tokens from the local token manager. The shared resources may therefore be shared by multiple different export protocols without conflict. Local processes and processes requesting shared resource operations through an export protocol that does not itself manage tokens are granted tokens through the operation token request mechanism. This mechanism enables local processes to use shared resources without the performance penalty of having to request through a local distributed client process.

The shared resources capability of Loucks' system expressly utilizes tokens communicating among the shared computerized nodes that only one computer process holding authorization tokens for a requested operation may perform that operation at one time. This approach is consistent with what the Appellants have admitted to be in the prior art. Accessibility is illustrated in Figures 3-5, for example, such that local token managers manage the accessibility of the data within the local file in addition to having a mobile token manager that permits communications between other clients/nodes in a network environment. Prior art token types appear to be

illustrated in Figures 6A, 6B within which respective types of permission, including read, write and exclusive operations, and the ability to lock read and write operations, are illustrated. The inventive token types of Loucks are illustrated in Figure 7. Hierarchical token management within a given node and between nodes is shown in Figures 8A-B and 9A-B.

ANALYSIS

Since the combinability of Slaughter and Loucks is not contested in the principal Brief on appeal, no governing case law is cited in this opinion. The focus of Appellants' arguments is that the combination of Slaughter and Loucks does not teach certain claimed features of the independent claims on appeal. The discussion focuses in the Brief on Slaughter with only passing mention made to Loucks such as the statement made at the bottom of page 8 of the principal Brief on appeal that "Loucks does not cure the deficiencies of Slaughter." No arguments are presented to us with respect to any dependent claim argued within the first stated rejection and, moreover, no arguments are presented to us in the Brief and Reply Brief as to the second stated rejection relying additionally upon Tavares as to certain dependent claims there.

Independent claims 1, 2, 8, 10, 11, and 12 permit accessibility to data files within a given node "when no other node has update permission." Correspondingly, in slightly different words, independent claims 14, 27, and 28 indicate that this update permission is "given to only one node at a time."

These features are known in the art in accordance with the Appellants' assessment of the prior art in finding of fact 1, present expressly within the dialogs in Loucks in finding of fact 4 and less clearly presented to the artisan but still present in Slaughter as noted in finding of fact 3.

Accessibility within a given node for a file within the node was known in the art according to Appellants' assessment of it in finding of fact 1. Accessibility was also taught among the teachings we isolated in Slaughter in finding of fact 3 and in Loucks in finding of fact 4. The need to correspondingly seek permission from another node to access data from that node or from within the given node seeking permission to access it, these features are taught among the teachings in Slaughter in finding of fact 3 and in Loucks in finding of fact 4. Although tokenized communications are not expressly taught but reasonably suggested in Slaughter as noted in finding of fact 2, they are a part of the admitted prior art in finding of fact 1 and expressly utilized in a shared, nodal, computerized environment in Loucks as discussed in finding of fact 4.

Generally speaking, the nature and extent of the discussions in each of the four findings of fact in this opinion relate directly or indirectly to each of the argued features with respect to commonly argued independent claims 1 and 10 at pages 7 and 9 of the principal Brief; commonly argued features of independent claims 2, 8, 11, and 12 as argued at pages 7 through 9 of the principal Brief, and as to independent claims 14, 27, and 28 as argued collectively at pages 9 and 10 of the principal Brief. These assessments of

the prior art are in addition to those findings made by the Examiner in the statement of the rejection as well as in the responsive arguments portion of the Answer.

With respect to the positions set forth in the Reply Brief, we must note initially that the final rejection incorporates by reference the last previous Office action mailed on Dec. 20, 2005. This Office action is specifically referenced at page 2 of the final rejection. The reasoning advanced by the Examiner beginning at page 3 of the Answer is identical to that which has been set forth in the last Non Final Office action on Dec. 20, 2005.

With respect to this background, we will not consider the arguments presented at pages 2 through the top of page 4 of the Reply Brief since they are considered to be untimely and have essentially been waived since the combinability arguments and the arguments set forth by the Examiner at page 4 of the Answer have been previously set forth in an identical manner beginning at page 3 of the Office action mailed on Dec. 20, 2005. Thus, the Appellants had adequate notice of the Examiner's positions and should have addressed these positions in the principal Brief on appeal. The filing of a Reply Brief is not to be construed as permission to present arguments that should have been raised initially in the principal Brief on appeal. To permit Appellants to present such arguments would essentially prejudice the appellate process since the Examiner is not permitted to reply for our benefit to responses generally made in the Reply Brief.

On the other hand, Appellants properly present arguments at page 4 of the Reply Brief addressed to the Examiner's comments at page 19 of the Answer which are within the responsive arguments portion of the Answer. These remarks focus only upon the subject matter common among independent claims 14, 27, and 28 and the Examiner's views that the arguments presented in the principal Brief on appeal relate directly to the Examiner's responsive arguments already made with respect to the first argument made in the principal Brief on appeal. Moreover, Appellants' remarks at page 4 of the Reply Brief, from our perspective, do not address the teaching value of Loucks at all as we indicated earlier in this opinion and consider only incompletely Slaughter's own teachings that we have outlined in our findings of fact and in the analysis portions in this opinion.

CONCLUSIONS OF LAW

Appellants have not shown that the Examiner erred in finding that the combination of Slaughter and Loucks teaches the subject matter of independent claims 1, 2, 8, 10, 11, 12, 14, 27, and 28. Additionally, because no arguments are presented with respect to the second stated rejection of certain dependent claims on appeal, Appellants have also not shown that the Examiner erred with respect to the subject matter of the dependent claims within this rejection.

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DECISION

The Examiner's first stated rejection under 35 U.S.C. § 103 of claims 1-3, 8, 10-12, 14, 23, 25, 27, and 28 is Affirmed. Correspondingly, the Examiner's second stated rejection within this same statutory basis of dependent claims 4-7, 16-22, 24, and 26 is also Affirmed. All claims on appeal, 1-8, 10-12, 14, and 16-28, are unpatentable.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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